

### REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-17 and 19-58 are in this case. Claims 1, 4-9 and 11, are rejected under § 102(b). Claims 19-27, 29-33, 36, 44, 45 and 58 are rejected under § 103. Claims 2, 3, 10, 12-17, 28, 34, 35, 37-43 and 46-57 are also rejected under § 103. Claims 1, 5-7, 23, 36, 37, 45 and 46 have been amended.

The claims before the Examiner are directed toward a system and method for teaching playing of a musical instrument without a human teacher. The system of the present invention includes a series of lessons stored in a computer program, each lesson being programmed to include automatic dynamic playing by a computer of at least one learning passage including a series of tones arranged in a pre-selected order, and a period of silence for playing of the learning passage by a student on an independent, stand-alone musical instrument, which is not coupled to the computer, so there is no comparison of the learning passage played by the student with the passage as played by the computer.

Applicant wishes to emphasize that the system and method of the invention are useful for teaching playing of any musical instrument, whether flute, violin, clarinet, etc. By way of example only, the invention is illustrated with reference to the electric organ. (See paragraph 0036 of the published application.) It is a particular feature of the present invention that the instrument is **not connected** to the computer for feedback, as are all prior art systems. Rather, the computer plays the learning passage, with sound, so that the student can hear the passage and then copy it by playing on his own instrument. Thus, the ear of the student is trained over time to hear when his playing sounds like the playing of the computer. Prior art systems, on the other hand, all require the piano to be connected to the computer, so that the computer can be used to compare the tone which is taught by the lesson with the tone actually played on the piano.

The claims are also directed to a system and method for composing original music on a computer. The method includes activating at least one composition command in the computer to compose the song, the composition command being selected from selecting a base note, and selecting a note length, and causing the computer to display a selected note at a selected length on a staff, so as to compose a song.

**§ 102(b) Rejection – Monte et al.**

The Examiner has rejected claims 1, 4-9 and 11, under §102(b) as being unpatentable over Monte et al (USP 5,183,398). Specifically, the Examiner states that Monte et al. disclose a system and method for learning playing of a musical instrument without a teacher, the system comprising: a series of lessons stored in a computer program, each lesson being programmed to include automatic dynamic playing of at least one learning passage by a computer, and a period of silence of a pre-defined length relative to said learning passage, for playing of said learning passage by a student on a musical instrument.

It is respectfully submitted that the Examiner has misunderstood the system and method of Monte et al. The Monte et al reference discloses an apparatus and method for interactive instruction of a student including providing a student with a musical keyboard coupled to a computer (col. 4, lines 35-39), and presenting the student with a lesson frame containing a **video** image requiring a response that the student is to **perform on the keyboard**. The student's keyboard performance is compared by the computer against a performance standard to determine whether an acceptable achievement level has been achieved. (Col. 3, lines 28-50) Each lesson consists of presenting a single note on the screen, which must be played by the student by pressing the appropriate key on the keyboard. The next lesson is selected in response to the achievement level of the student determined during the comparison. (col. 6, lines 3-9).

In sharp contrast with the Monte apparatus, according to the present invention, the computer plays (**with** sound) each portion to be learned by the student. Each portion consists of a **series of tones** arranged in a pre-selected order, which remains the same as long as the student wishes (par. 0051), and does not change according to the student's performance. This is followed by a period of silence during which the student plays the portion, i.e., copies the sound heard on the computer, and the student monitors his own playing, thereby developing his ear for hearing errors. See, for example, par. 0054, lines 9-19, and par. 0066, lines 1-11, of the printed specification. No comparison of the notes played by the student with the displayed notes is carried out by the computer anywhere in the present application; rather, since the computer is not coupled to (that is, is independent of) the musical instrument, the student is enabled to develop skill through his or her senses. See, for example, par. 0075, stating that the

computer finishes playing and waits for instructions from the student, and Figs. 7 and 11, where there is no comparison step in the flow chart.

While continuing to traverse the Examiner's rejections, Applicant has, in order to expedite the prosecution, chosen to amend independent claims 1 and 23 in order to clarify and emphasize the crucial distinctions between the present invention and the system disclosed by the Monte patent cited by the Examiner. Specifically, independent claims 1 and 23 have been amended to clarify that each learning passage includes a series of tones arranged in a pre-selected order, and that the musical instrument is not coupled to the computer so there can be no comparison carried out by the computer or any feedback provided by the computer to the student. Support for these amendments can be found in the printed specification, for example in paragraph 0033, lines 7-9, and in original claim 18. As stated above, the drawings of the method of the invention, e.g. Figs. 7 and 11, show no comparison steps.

Applicant believes that the amendment of the claims, and the above distinguishing comments, completely overcome the Examiner's rejections on § 102(b) grounds as to independent claim 1. Claim 4 is canceled. Since claims 5-9 and 11 depend from claim 1, and add further limitations thereto, it is believed that all of claims 1 and 5-9, rejected on § 102 grounds, are now allowable.

#### **§ 103 Rejection – Monte et al and Renard et al.**

The Examiner has rejected claims 19-27, 29-33, 36, 44, 45 and 58 under § 103(a) as being unpatentable over Monte et al. in view of Renard et al. (USP 6,066,791). Specifically, the Examiner states that Monte et al. disclose dividing the song into periods to be learned. He continues that, while Monte et al do not disclose buttons for composing, Renard et al discloses a system including a composition portion, pointing to Figure 9. The Examiner further states that Renard et al disclose the system wherein the musical instrument is independent of the computer, pointing to Figure 1.

The patent to Monte et al. divides a lesson into a sequence of instructional lesson frames, each including signals representing an audio display portion and a video display portion. The lessons are selected by the computer based on previous performance of the student. There is no teaching or suggestion of dividing a song to be learned or played into musical periods, as claimed in claim 58 and stated in paragraph [0063], lines 1-5. There is

also no suggestion of permitting a student to select from the following options in a practice screen: a) a demo of a complete song formed of a plurality of said learning passages; b) a practice mode selector for dividing a song into at least two learning passages of pre-selected length for automatic dynamic playing by said computer; and c) return to start.

The Renard et al. patent discloses a method and apparatus for instructing a student how to sight read music on a staff, and how to play a musical instrument. Contrary to the Examiner's statement, the musical instrument of Renard et al is **connected to the computer** (col. 4, lines 62-63 and Figure 1), and the computer monitors the student's playing (col. 5, lines 1-5 and 31-34) by comparing the notes played by the student with those the student was supposed to play. There is no period of silence during which the student plays back the learned material (col. 7, lines 26-36).

With regard to claims 36, 44 and 45, the Examiner states that Renard et al. disclose the system, further comprising a composition portion including means for activating, by means of a button, at least one composition command to compose a song, and points to Fig. 9. It is respectfully submitted, first with regard to Monte et al, that Monte et al do not teach or suggest, anywhere in the patent, the possibility of composing an original song. In col. 11, lines 12-30, the patent discusses a Play Along presentation mode. This mode does **not** permit the student to compose a song. Rather, music notation is put on the display screen, the student plays the music on the keyboard, and the computer records what notes (keys) the student actually played. At the same time, the computer performs a runtime analysis of the signals fed from the keyboard while the student plays, so as to determine how the student is playing (col. 11, lines 44-56). This bears no relation to selecting notes of various lengths and placing them in a desired order onto a staff on the screen, without connection to what is happening on the instrument at the time of composing, which is the case in the present invention.

Next, with respect to Renard et al, Renard et al. do not teach or suggest, anywhere in the patent, the possibility of composing an original song. Figure 9 is a screen shot of the display on the display device illustrating an image moving between a set of two staves (col. 4, lines 44-46). This display has two purposes, which are described in detail from col. 9, line 25, to col. 10, line 26. First, the image is displayed on the screen to teach the student to focus on a constant point while trying to read the nearby musical notes with his or her peripheral view (col.9, lines 42-44). Preferably, the student is initially instructed to focus on the anchor

without trying to play the musical piece (col. 9, lines 65-68). Subsequently, the student attempts to play the musical piece being displayed, while the computer monitors the musical instrument to determine whether the student is playing the musical piece correctly. (col. 10, lines 7-16) Thus, there is no mention in any way, shape or form of composing an original song.

In sharp contrast with the Renard et al apparatus, according to the present invention, the computer permits a student or any other person to compose an original song by selecting notes and/or lengths of notes, and, by pressing a button or key, causing the selected note of the selected length to appear automatically in the appropriate location and with the appropriate appearance on a staff. The composed song can then be used as a lesson, like any other lesson, for teaching the student to play the song.

While continuing to traverse the Examiner's rejections, Applicant has, in order to expedite the prosecution, chosen to amend independent claims 36 and 45 in order to clarify and emphasize the crucial distinctions between the present invention and the system disclosed by the Renard patent cited by the Examiner. Specifically, independent claims 36 and 45 have been amended to clarify that the composer (rather than the computer, as in the Monte patent), by actuating a button, activates one or more composition commands in a computer to compose an original song, and the basic note and note length selected by the composer are automatically displayed in a correct location on a displayed staff in response to the composition command. Such a possibility is not taught or suggested by either Monte et al or Renard et al, taken alone or together. Support for these amendments can be found in the printed specification, for example in par. 0076, and in Fig. 12.

#### **§ 103 Rejection – Monte et al, Renard et al., and Eller**

. The Examiner has rejected claims 2, 3, 10, 12-17, 28, 34, 35, 37-43, and 46-57 under § 103(a) as being unpatentable over Monte et al. in view of Renard et al and further in view of Eller (USP 6,201,174). Specifically, the Examiner states that Eller discloses a system, wherein each lesson includes a plurality of parameters, and said system includes means for selectively changing each of said parameters by the student.

The patents to Monte et al and Renard et al. have been discussed above. The Eller patent does not disclose a method including composition commands, per se, which permits a composer to compose a new and original song. Rather, Eller discloses a method and system for producing an enhanced tablature notation for a musical score, i.e., uses a computer to assist musicians in producing sheet music for musical compositions. An exemplary computing system for use with the computerized tablature composer of the invention includes a pen input device and a tablet, which transmit input gestures made by a musician to the computer. The display displays the input data as a tablature notation. (Col. 5, lines 41-42, 51-56, 60-66). Thus, this invention relates to conversion or translation of music written on a conventional staff (as for orchestral scores) to tablature notation (for stringed instruments).

There is no teaching or suggestion in Eller of playing music displayed on a screen as a lesson to teach a student to play a musical instrument. In fact, this system is not designed for teaching playing of music, but for providing tablature notation for a person writing on a conventional staff, and includes no lessons whatsoever. Thus, even combining the systems of Renard et al. and Eller would not result in the method or system of the present invention, as neither of them provides a music lesson wherein a computer plays a musical selection and is then silent so that a student can play back that musical selection on a musical instrument not connected to the computer.

Even combining the systems of Monte et al, Renard et al. and Eller would not result in the method or system of the present invention, as none of them permits composition of an original song by a composer or student by allowing them to click on a note name and a note length, followed by the computer automatically displaying the selected note of the selected note length in the appropriate location on a staff, as in the present invention.

Applicants believe that the amendment of the claims completely overcomes the Examiner's rejections on § 103(a) grounds as to independent claims 1, 23, 36 and 45. Since claims 2,3,10, 12-17,19-22 depend from claim 1 and add further limitations thereto, claims 24-35 and 58 depend from claim 23, and claims 37-44, and 46-57 depend from claim 36 and add further limitations thereto, it is believed that all of claims 2, 3, 10, 12-17, and 19- 58 rejected on § 103(a) grounds are in condition for allowance. Prompt notice of allowance is respectfully solicited.

Should the examiner be of the opinion that any outstanding issues remain, it is requested that the undersigned attorney be called to discuss them.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert L. Stone", is written over a horizontal line.

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